

Three interesting sections then follow on protozoal investigations, largely carried out on the floating laboratory; on the helminthes collected in the Sudan; and on the reptiles and poisonous snakes. In the latter we note that the author speaks of "saliva" in connection with the fluid ejected by the spitting cobra (*Naja nigricollis*). The writer has often made these cobras spit on to the glass roof of their cage, but never could convince himself that the secretion came from the fangs. The expectoration, on drying, gives a white powder, whereas snake-venom is usually a pale yellow. The report by the economic entomologist is especially interesting, recording as it does the misdeeds of such pests as the cigarette beetle, that eats cayenne pepper; the white ants, that eat leather camel-bags—though they will not touch green Willesden canvas, "*Solignum*" also appearing to be an absolute preventive against them—the teredo, that attacks the timber in Port Sudan; the horn beetle, the enemy of the sportsman and trophy hunter; the clothes-beetle, the weevils, the cotton boll-worms, and the locusts, veritable plagues of Egypt.

A complete list of Sudanese mosquitoes, including several new species, is contributed by Theobald.

In an article on the healing art as practised by the Dervishes, the following effective method of amputation is described:—"The limb is stretched out of an opening in the wall or out of a window, and it severed with one stroke of a sharp sword, the stump being then plunged into boiling oil to stop the bleeding." The native belief that the wearing of high pattens is a protection against guinea-worm should be noted by those investigating the mode of entry of this crippling parasite. The physical characters of the Nilotic Negroid tribes, based on the work of the late Dr. Pirrie, forms a fascinating section, and "the call of Africa" is insistent on every page.

The work concludes with chemical investigations into the food-stuffs and very interesting work on the gums. We have said enough, perhaps, to give a slight idea of the interest and value of this report, not only to the scientific, but also to the general reader, and we heartily congratulate the director and his collaborators on the result. It is a magnificent volume, profusely illustrated, but it is just to this magnificence that we venture to raise objection. Its price and bulk will deter many from purchasing it to whom it would be of value. We think it might be possible to issue the work in a number of sections, medical, entomological, ethnological, &c., otherwise we are afraid that the next volume may be twice as bulky and twice as expensive.

J. W. W. S.

THE DARWIN COMMEMORATION AT CAMBRIDGE.

THE celebrations in commemoration of the centenary of the birth of Charles Darwin and of the fiftieth anniversary of the publication of "*The Origin of Species*" are being held at Cambridge this week. The programme commenced on Tuesday, June 22, with a reception of delegates and other invited guests by the Chancellor of the University, Lord Rayleigh, O.M., F.R.S., in the Fitzwilliam Museum. By the kind permission of the master and fellows of Peterhouse, the college gardens were accessible from the museum. On the following day, Wednesday, there was a presentation of addresses by delegates of universities, colleges, academies, and learned societies in the Senate House. After an address by the Chancellor, and the presentation of delegates and addresses, there were a few short speeches. During the afternoon visits were made to the various colleges,

and these were followed by a garden party, given by the master and fellows of Christ's College, in the college grounds. In the evening a banquet was held in the new examination hall; after which the master and fellows of Pembroke College gave an at home in the college hall and gardens. To-day (Thursday), the concluding day of the celebration, honorary degrees are to be conferred upon some of the delegates in the Senate House; the Rede lecture is to be delivered by Sir Archibald Geikie, president of the Royal Society, upon "Darwin as Geologist"; and a garden party is to be given at Trinity College by members of the Darwin family.

The delegates upon each of whom the degree of Doctor of Science *honoris causa* is to be conferred are:—Prince Roland Bonaparte, member of the Paris Academy of Sciences; Édouard van Beneden, professor of zoology at Liège; Geheimrat Hofrat Bütschli, professor of zoology and palæontology at Heidelberg; Robert Chodat, professor of botany at Geneva; Francis Darwin, F.R.S., honorary fellow of Christ's College, and formerly reader in botany; Karl F. Goebel, professor of botany at Munich; Ludwig von Graff, professor of zoology and comparative anatomy at the University of Graz, and president-elect of the International Zoological Congress which meets at Graz next year; Richard Hertwig, professor of zoology and comparative anatomy at Munich; Harold Höfding, professor of philosophy at Copenhagen; Jacques Loeb, professor of physiology in the University of California; Edmond Perrier, a member of the Institute of France, distinguished by his able organisation of the Natural History Museum of Paris, over which he presides; Gustav Albert Schwalbe, professor of anatomy at Strassburg; Hermann Graf zu Solms-Laubach, professor of botany at Strassburg; Clement Timiriazeff, professor of botany in Moscow; Frantisek Vejdosky, professor of zoology in the Bohemian University of Prague; Max Verworn, professor of physiology at Göttingen; Hermann Vöchting, professor of botany at Tübingen; Hugo de Vries, professor of botany at Amsterdam; Charles Doolittle Walcott, secretary of the Smithsonian Institution at Washington; Edmund Beecher Wilson, professor of zoology in Columbia University, New York; and Charles René Zeiller, professor of palæobotany in the Ecole des Mines, Paris.

During the celebration there was an exhibition of portraits, books, and other objects of interest in connection with Darwin, in the old library of Christ's College. The exhibition will remain open until the end of this week. All the many objects exhibited are directly connected with Charles Darwin or his ancestors. In the outer room are all the important portraits made of Charles Darwin during the time he lived. Of these mention should be made of the painting by Sir W. B. Richmond, K.C.B., which shows Darwin in his LL.D. gown, lent by the university; the well-known portrait by the Hon. John Collier, showing Darwin in his long black cloak and holding his hat in his hand, lent by the Linnean Society of London; and the well-known profile by W. W. Ouless, a replica of which hangs in Christ's College Hall, lent by W. E. Darwin. The larger portraits also include two of Mrs. Charles Darwin, by C. Fairfax Murray; one of Robert Waring Darwin, father of the naturalist; and others of Darwin's ancestors, amongst them the painting of his grandfather, Erasmus Darwin, by J. Wright, of Derby. Two crayon sketches of Darwin in middle life, by S. Laurence; water-colour drawings of Down, and of various scenes connected with the voyage of H.M.S. *Beagle*, are also represented here, together with the instruments used by Darwin on board the *Beagle*, and

some specimens of birds and fish collected during that voyage.

In the further room are Woolner's bust; a bust, medallion, and miniature of the Shrewsbury statue, by Horace Montfond; and a large bronze head, by William Couper, of New York, which the American delegates to the Darwin centenary are presenting to Christ's College. The large series of paintings, photographs, and sketches in this room represent Charles Darwin from the age of four to old age, and include Pelligrini's *Vanity Fair* cartoon of the naturalist in his high chair, similar to the one exhibited. Manuscripts, letters, copies of first editions, with Darwin's own notes, and medals and diplomas awarded to him, are present in great numbers, as also are many pictures of Down, Charles Darwin's home.

By the kindness of Mr. Francis Darwin, Charles Darwin's library was on view at the Botany School during the celebration. A few of the most interesting volumes were displayed in the Botanical Museum. The rock-specimens collected by Charles Darwin during the voyage of the *Beagle* were exhibited in the Sedgwick Museum, and the librarian of the University Library arranged an exhibition of MSS. and books illustrating the progress of scientific study.

The delegates selected by universities, academies, colleges, learned societies, and other bodies abroad to attend the celebration included the following:—

America (United States).—University of Michigan, Prof. H. S. Carhart; Johns Hopkins University, Prof. J. Mark Baldwin; University of California, Prof. Jacques Loeb; Brooklyn Institute of Arts and Sciences, Prof. C. B. Davenport; Boston Natural History Society, and Harvard University, Prof. Theobald Smith; Cold Spring Harbour Station for Experimental Evolution, Prof. C. B. Davenport; University of Ohio, Prof. G. Wells Knight; Cornell University, Dr. J. Gould Schurman; University of Wisconsin, Dr. F. B. Power; Mexican Government, Department of Public Instruction, Dr. J. Mark Baldwin; University of Minnesota, Prof. E. Van Dyke Robinson; Yale University and the Peabody Museum of Natural History, Prof. R. H. Chittenden; the Connecticut Academy of Arts and Sciences, Prof. Tracy Peck; New York Academy of Sciences, Mr. C. F. Cox, president; Columbia University, Prof. E. B. Wilson; New York University, Prof. H. M. Biggs; American Museum of Natural History, Prof. D. G. Elliot; University of Pennsylvania, Mr. C. C. Harrison; Philadelphia Academy of Natural Sciences, Dr. A. E. Brown; American Philosophical Society, Dr. H. F. Osborn; Carnegie Institute, Colonel Church; Princeton University, Prof. W. B. Scott and Prof. O. W. Richardson; Smithsonian Institution, Dr. C. D. Walcott; Carnegie Institution, Washington, Dr. R. S. Woodward; National Academy of Sciences, Dr. G. E. Hale; George Washington University, Dr. H. W. Wiley; Academy of Sciences, Washington, Dr. L. O. Howard; Woods Hole, Prof. E. B. Wilson.

America (South).—Universidad de Chile, Domingo Gana.

Austria-Hungary.—Magyar Tudományos Akadémia, Prof. S. Apáthy; Kir. Magyar Tudomány-Egyetem, Prof. Jules Dollinger; Graz Universität, Prof. Ludwig von Graff; Kolozsva Universität, Prof. S. Apáthy; Prague University, Prof. F. Vajdovsky; Kaiserl. Akad. der Wissenschaften, Vienna, Dr. F. Steindachner and Prof. R. Wettstein; Vienna Universität and the Anthropologische Gesellschaft, Prof. V. Ebner; Zoologisch-botanische Gesellschaft, Vienna, Prof. R. Wettstein; Naturhistorisches Hof-Museum, Vienna, Dr. F. Steindachner.

Belgium.—Université libre de Bruxelles, M. Auguste Lamere; Académie Royale des Sciences, Prof. E. van Beneden; Musée Royal d'histoire naturelle de Belgique, M. E. Gilson; Ghent Université, M. H. Leboucq; Louvain Université, Prof. H. de Dorlodot.

Denmark.—Copenhagen Universitet and Det Kongelige Danske Videnskabernes Selskab, Prof. H. Höfding; National Museet, Prof. H. F. E. Jungersen.

Egypt.—Cairo School of Medicine, Mr. H. P. Keatinge.

France.—Société Linnéenne de Normandie and Caen Université, Prof. L. Brasil; Lille Université, Prof. A. Malaquin; Montpellier Université, Prof. O. Duboscq; Nancy Université, Prof. L. Cuénot; Université de Paris, Prof. F. Le Dantec; Institut de France, M. E. Perrier and Prince Roland Bonaparte; École d'Anthropologie, Prof. G. Papillault; Musée d'Histoire Naturelle, M. E. Perrier; Institut Pasteur, Prof. Élie Metchnikoff; École des Mines, M. R. Zeiller; Société d'Anthropologie, Dr. Manouvrier; Société de Biologie, Dr. Eugène Dupuy and Prof. L. Lapique; Société géologique de France, M. de Margerie.

Germany.—Berlin Universität, Prof. C. Stumpf; Königl. Preussische Akademie der Wissenschaften, Prof. Waldeyer, Prof. Diels, Prof. Engler, and Prof. O. Hertwig; Königl. Museum für Naturkunde, Prof. A. Brauer; Deutsche Botanische Gesellschaft, Prof. A. Engler; Gesellschaft für Anthropologie, Ethnologie und Urgeschichte, Dr. F. von Luschan; Bonn Universität, Prof. Schultze; Breslau Universität and the Schlesische Gesellschaft für vaterländische Cultur, Prof. Kükenthal; Frankfurt, Senckenbergische Naturforschende Gesellschaft, Dr. Ernst Roediger; Freiburg i. B. Universität, Prof. R. Wiedersheim; Giessen Universität, Prof. Spengel; Göttingen Königl. Gesellschaft der Wissenschaften, Prof. M. Verworn; Göttingen Universität, Prof. Berthold; Greifswald Universität, Prof. Erich Kallius; Halle Leopoldinisch-Carolinische Akademie, Dr. R. Hertwig; Halle Universität and Naturforschende Gesellschaft, Prof. J. Walther; Heidelberg Universität, Prof. Bütschli; Jena Universität, Prof. L. Plate; Kiel Universität, Prof. Brandt; Leipzig Universität and Königl. Sächsische Gesellschaft, Prof. Rabl; Marburg Universität, Prof. Korschelt; München Universität, Prof. R. Hertwig; München, K. Bayerische Akademie der Wissenschaften, Prof. Goebel; Münster Universität, Prof. E. Ballowitz; Rostock Universität, Prof. H. Spemann; Strassburg Universität, Prof. Solms-Laubach; Tübingen Universität, Prof. H. von Vöchting; Würzburg Universität, Prof. Theodor Boveri.

Holland.—Koninklijke Akademie van Wetenschappen, Prof. H. de Vries; Koninklijk Zoologisch Genootschap "Natura Artis Magistra," Dr. C. Kerbert; Groningen Universiteit, Prof. J. F. van Bemmelen; Hollandsche Maatschappij de Wetenschappen, Dr. J. P. Lotsy; Leyden Universiteit, Prof. G. C. J. Vosmaer; Utrecht Universiteit, Prof. A. A. W. Hubrecht.

Java.—Buitenzorg, Departement van Landbouw, Dr. J. C. Koningsberger.

Italy.—Catania Università, Prof. W. Bateson, F.R.S.; Genoa Università, Prof. R. Issel; Modena, Società di Naturalisti e Matematici, Prof. A. C. Seward, F.R.S.; Naples, Stazione Zoologica, Dr. R. Dohrn; Società Geografica Italiana, Marchese di San Giuliano; R. Accademia dei Lincei, Conte Ugo Balzani, Lord Rayleigh, O.M., F.R.S., and Sir George Howard Darwin, K.C.B., F.R.S.; Siena Università, Prof. C. Achille Sclavo; R. Istituto Veneto, Dr. G. Veronese.

Japan.—Kyoto University, Prof. G. Kuwaki; Tokyo University, Prof. C. Ishikawa.

Norway.—Christiania Universitet, Prof. H. Mohn.

Portugal.—Coimbra Universidade, Prof. J. A. Henriques; Lisbon, Sociedade de Geographia, Dr. S. Telles; Oporto, Academia Polytechnica, A. F. de Lacerda.

Russia.—Dorpat Universitet, Prof. A. I. Jarotskij and Prof. N. I. Kuznetsov; Helsingfors Universitetet and Finska Vetenskaps Societet, Prof. F. Elfving; Moscow Universitet and Société Impériale des Naturalistes de Moscou, Prof. C. A. Timiriazeff; St. Petersburg Universitet, Prof. V. M. Schimkewitsch; St. Petersburg, Imperatorskaja Akademija Nauk, Prof. V. V. Salensky and Prof. I. P. Borodin.

Sweden.—Lund Universitetet, Prof. J. Forssman; Lund, Kungl. Physiografiska Sällskapet, Prof. O. Nordstedt; Stockholm, Kungl. Svenska Vetenskaps-akademien, Prof. H. Thée and Dr. Svante Arrhenius; Stockholms Högskola, Prof. W. Leche; Stockholm, Naturhistoriska Riksmuseet, Prof. A. G. Nathorst; Stockholm, Kungl. Karolinska Medico-Kirurgiska Institutet, Count K. A. H. Möörner; Uppsala Universitetet and K. Vetenskaps Societeten, Prof. S. G. Hedin.

Switzerland.—Bern Universität, Prof. H. Strasser; Geneva Université, Prof. R. Chodat; Neuchatel Académie,

Prof. Edmond Béraneck; Schweizerische Naturforschende Gesellschaft, Dr. P. Sarasin.

Africa.—University of the Cape of Good Hope; South African College, Prof. H. H. W. Pearson; Grahamstown, Rhodes University College, Bouchier F. Hawkesley; Transvaal University College, Sir Richard Solomon, K.C., K.C.B., K.C.M.G.; Geological Society of South Africa, Prof. A. C. Seward, F.R.S.

Australia.—Adelaide University, Prof. W. H. Bragg, F.R.S.; University of Tasmania, J. Sprent; Royal Society of Tasmania, the Hon. J. McCall; Melbourne University, Dr. C. J. Martin, F.R.S.; Royal Society of Victoria, Prof. A. Dendy, F.R.S.; Sydney University and Royal Society of New South Wales, Prof. A. Liversidge, F.R.S.

Canada.—University of New Brunswick, Dr. C. C. Jones; Nova Scotian Institute of Science, Dr. H. S. Poole; Kingston, Queen's University, Prof. N. F. Dupuis; McGill University, Prof. E. W. MacBride; Royal Society of Canada, Prof. W. H. Ellis; Toronto University, Dr. R. A. Falconer and Prof. T. G. Brodie, F.R.S.; University of Manitoba, Prof. A. H. R. Buller.

India and Ceylon.—Allahabad University, Prof. A. W. Ward; Bombay University, Sir E. T. Candy; Calcutta University, Prof. S. Chandra Mahalanobis; Geological Survey of India, R. D. Oldham; Asiatic Society of Bengal, Lieut.-Colonel H. H. Godwin-Austen, F.R.S.; Punjab University, the Hon. Sir Lewis Tupper, K.C.I.E.; Madras University, Edgar Thurston; Peradeniya, Royal Botanic Gardens, Dr. J. C. Willis.

New Zealand.—Auckland University College, the Hon. W. Pember Reeves; Canterbury University College, Prof. E. Rutherford, F.R.S.; Philosophical Institute of Canterbury, T. V. Hodgson; New Zealand University, the Hon. Sir Robert Stout, K.C.M.G., Prof. Sale, and Prof. J. M. Brown; Wellington, Victoria, University College, H. D. Bell.

Straits Settlements.—Royal Asiatic Society (Straits Branch), J. B. Carruthers.

In addition to these representatives of institutions abroad, delegates were appointed by our own universities, university colleges, and scientific societies to take part in the celebration, and many other distinguished guests were present. The invitations to men of science were, except in a few cases, confined to naturalists, the committee having decided not to invite representatives of the physical sciences as such. Had it not been necessary, on account of space, to make this limitation, there is no doubt the celebration would have been even more remarkable in character than it was. The spirit of Darwin is the spirit of modern science, and every investigator who has been inspired by it would have welcomed an opportunity to assemble with the object of commemorating the greatness of the man and his work. No more brilliant assembly of representatives of the biological sciences throughout the world could, however, have been brought together than that which met on Tuesday at the opening of the celebration. The committee, and particularly the honorary secretaries, Prof. A. C. Seward and Mr. J. W. Clark, are to be congratulated upon the plan of the celebration, and the very successful way in which it has been carried out. Not for many years can Cambridge be the focus of so many investigators of animate nature from far and near as it has been this week. The celebration is of great historic significance, and will long be remembered as a worthy expression of the high estimation in which Charles Darwin's memory is held throughout the scientific world.

NOTES.

ON June 28, 29, and possibly June 30, the third meeting of the Solar Commission of the International Meteorological Committee will be held, under the presidency of Sir Norman Lockyer, K.C.B. The Royal Society has placed a room at the service of the commission, and the

meetings will commence at 11 a.m. each day. The following members have notified their intention of being present:—M. A. Angot (France), Prof. H. Birkeland (Norway), Prof. E. von Everdingen (Holland), Sir Norman Lockyer (Great Britain), Dr. W. J. S. Lockyer (Great Britain), Captain H. G. Lyons (Egypt), M. E. Marchand (France), Prof. H. Mohn (Norway), Dr. W. N. Shaw (Great Britain), M. A. Silgado (Brazil), and M. Teisserenc de Bort (France). This commission, it may be remembered, was originated by the International Meteorological Committee at the meeting in Southport in 1903, when Dr. W. N. Shaw proposed that a commission should be appointed to review and discuss meteorological observations from the point of view of their connection with solar physics. Dr. Shaw's motion was adopted, and Sir Norman Lockyer, Dr. Shaw, Prof. Pernter, and M. Angot were elected to serve on this commission, with power to add to their number and to elect their officers. Since then two meetings have been held, one at Cambridge in 1904 and the other at Innsbruck in 1905, with Sir Norman Lockyer as president and the late Sir John Eliot as secretary. The forthcoming and third meeting of the commission will be devoted chiefly, among other items, to the actions taken with regard to previous resolutions concerning the collection and publication of meteorological and solar data, and also to an important statement submitted by Dr. Shaw in relation to the selection of stations from ten-degree square areas.

Of the many scientific organisations, few have made more rapid progress than the Association of Economic Biologists. Founded in November, 1904, it has already held conferences in Birmingham, Liverpool, London, Edinburgh, and Cambridge, and on July 13, 14, and 15 it will meet at Oxford. According to the programme, the annual general meeting will be opened by the president, Dr. A. E. Shipley, F.R.S., on July 13, with an address on some diseases of fish and birds associated with the presence of parasites. The programme is a lengthy and interesting one. Prof. G. H. F. Nuttall, F.R.S., and Dr. Hadwen will read a communication on the successful curative treatment of piropilosis, to be followed by others by Prof. E. B. Poulton, F.R.S., on predaceous insects and their prey, and Prof. W. Somerville, on injurious fungi. "The Winter Breeding of the House-fly" is the title of a paper by Mr. F. P. Jepson; Mr. A. D. Darbishire will contribute an important paper on the application of recent discoveries in heredity to economic problems, and Dr. S. A. Neave on the distribution of *Glossina palpalis* and sleeping sickness. Other communications will be made by Messrs. W. E. Collinge, A. J. Grove, C. Gordon Hewitt, C. H. Hooper, R. S. MacDougall, G. W. Smith, and C. Warburton. On the afternoon of Wednesday, July 14, Prof. Somerville and Mr. G. H. Grosvenor will lead an excursion to Bagley Wood. Further particulars of the meeting may be obtained from Mr. Walter E. Collinge, Uffington, Berkhamsted.

THE annual general meeting of the Research Defence Society will be held at the Royal Society of Medicine, 20 Hanover Square, W., on Friday, June 25, at five o'clock. The Earl of Cromer, president of the society, will take the chair. Other speakers will be Sir James Dewar, Sir A. Conan Doyle, the Hon. Walter Guinness, and Prof. Starling.

THE sixth International Congress of Psychology will be held in Geneva on August 3-7. M. Flournoy is to be the president of the congress, and the general secretary is Dr. E. Claparède, 11 Avenue de Champel, Geneva.